ABSTRACT OF THE DISCLOSURE

In a point-to-multipoint link traffic is transmitted in packets across the shared medium. Access to the medium is controlled by permits sent by a central node to multipoint nodes in response to a queue record of the number of packets awaiting transmission at the multipoint nodes. When circuit emulated traffic, or traffic with tight delay and delay variation requirements, is to be sent across the link, permits are sent by the central node unsolicited at regular intervals in accordance with information stored in a scheduler. The scheduler may be a single or several circular memories comprising cells representing time slots on the link. The cells contain scheduling information corresponding to one or more multipoint nodes. The central node consults the scheduler to determine if a permit is scheduled. If no permit is scheduled the time slot may be allocated to an unscheduled service on the basis of a queue record.